

Welcome to the

The New Consent Decree and Certification of Sanitary Sewer System Collection, Transmission and Treatment Capacity

Presented by

Carlos L. Hernandez, PE, CFM, LEED AP, CEHP

November 13, 2013

FBPE Course No.: 0009219



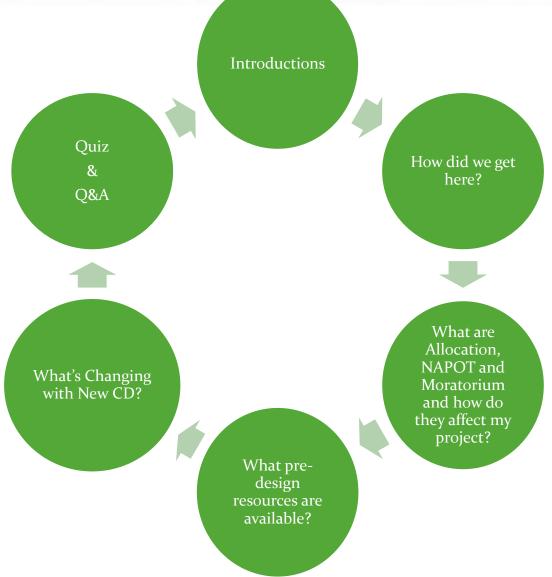


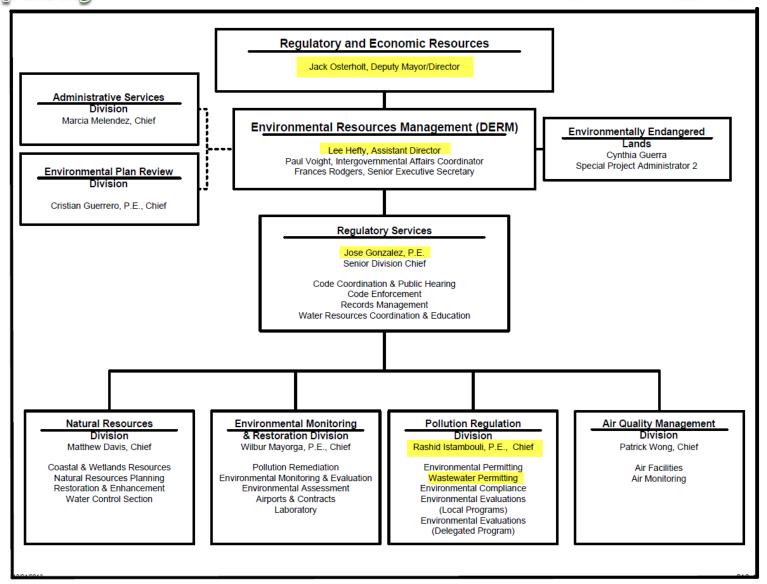




Department of Regulatory and Economic Resources

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This is Not the First Presentation!

Outcome?

Increase Protection of Environment.

Deliver Projects to your clients faster.



Getting it Right the First Time Workshop for City Officials

DERM Overtown Transit Village North
October 29th, 2008
701 NW 1 Court, 2nd Floor Training Room
1 – 5 pm

Reservations (786) 315-2800

The Federal Consent Decree: First & Second Partial

UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF FLORIDA

UNITED STATES OF AMERICA,

Plaintiff,

v.

METROPOLITAN DADE COUNTY, and MIAMI-DADE WATER AND SEWER AUTHORITY DEPARTMENT,

Defendants,

and

STATE OF FLORIDA,

Statutory Defendant.

CASE NO. 93-1109 CIV-MOREN

FIRST PARTIAL CONSENT DECREE

WHEREAS, Plaintiff, the United States of America, by
the authority of the Attorney General of the United States and
through its undersigned counsel, acting at the request and on
behalf of the Administrator of the United States Environmental
Protection Agency ("EPA"), has filed a complaint in this action
seeking injunctive relief pursuant to Section 504 of the Clean
Water Act (the "Clean Water Act"), 33 U.S.C. § 1364, alleging
that defendants, Metropolitan Dade County and the Miami-Dade
Water and Sewer Authority Department (hereinafter collectively
referred to as the "Defendants"), are presenting an imminent and
substantial endangement to the health or Welfare of persons by
i) the continued use of the 72-inch force main that conveys
untreated wastewater from the City of Miami under Biscayne Bay to

the Central District Wastewater Treatment Plant ("Central Plant"), and ii) the unpermitted discharge of untreated wastewater from the Defendants' wastewater treatment and collection system; and

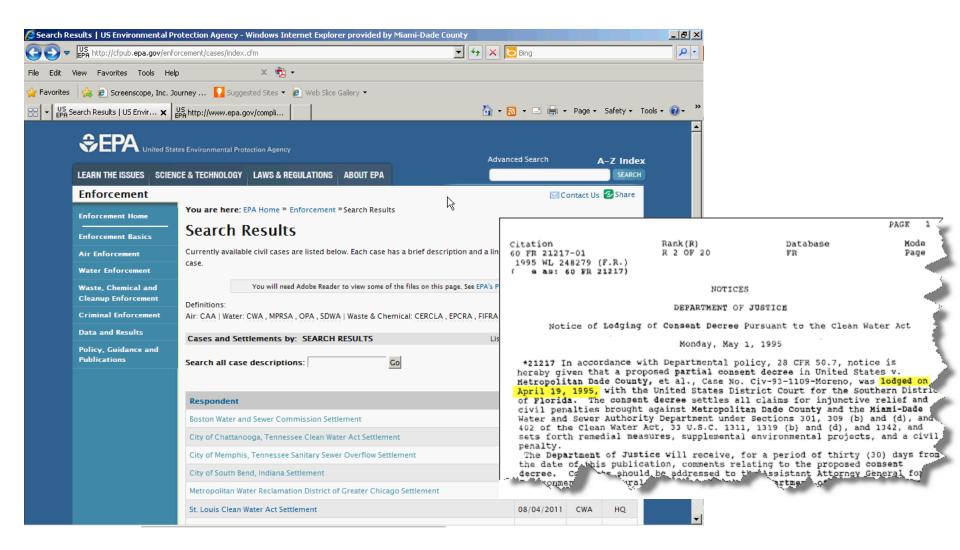
WHEREAS, Defendant Metropolitan Dade County,

...1st Partial CD...

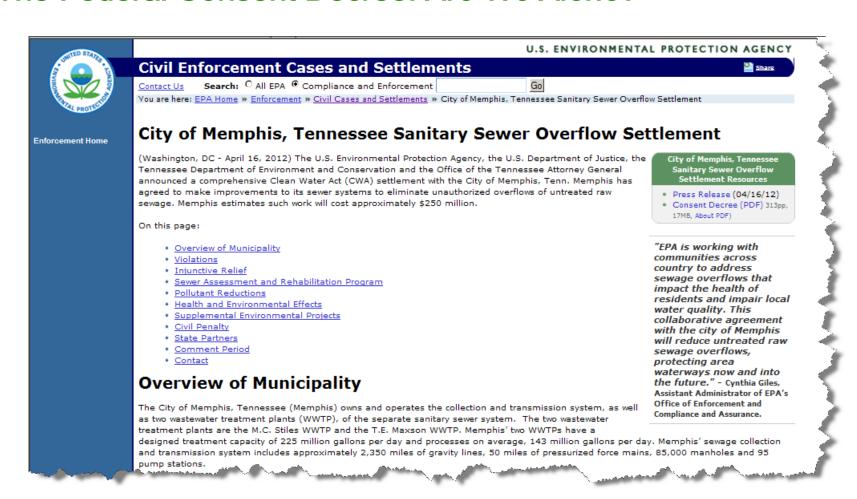
WHEREAS, the First Partial Consent Decree entered by this Court on January 13, 1994, resolves the First Claim for Relief by the United States in the complaint concerning the alleged threat presented by the continued use of the 72-inch force main that conveys untreated wastewater from the City of Miami under Biscayne Bay to the Central Plant; and

...2nd Partial CD...

The Federal Consent Decree: Are We Alone?



The Federal Consent Decree: Are We Alone?



The Federal Consent Decree: Are We Alone?



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Enforcement Home

Hampton Roads Sanitiation Clean Water Act Settlement in the Chesapeake Bay Area

(WASHINGTON, DC - Sept. 29, 2009) Hampton Roads Sanitation District (HRSD), based in Virginia Beach, Va., has agreed to pay a \$900,000 civil penalty and to take corrective actions to reduce alleged sanitary sewer overflows from its collection system and nine sewage treatment plants that have polluted the Chesapeake Bay and its tributaries, the Justice Department, U.S. Environmental Protection Agency (EPA), and the Commonwealth of Virginia announced today.

Under a settlement filed today in federal court in Norfolk, Va., HRSD is required to collect data, conduct computer modeling, and, working with the municipalities that it serves, develop a regional plan to ensure that the HRSD sewer system has adequate capacity to handle flows from severe storms and to prevent overflows of sewage. Subsequently, HRSD must implement the regional plan. Since HRSD has not identified the projects pending completion of the plan, the cost of that effort is currently unknown although it is expected to cost millions of dollars.

The settlement also requires HRSD to make major upgrades and improvements to the sewer system infrastructure over the next eight years. These upgrades are estimated to cost at least \$140 million. The settlement requires that HRSD evaluate, replace, rehabilitate, or upgrade pipes, pump stations and other infrastructure where inspections and screenings show a material risk of failure; HRSD also must submit and implement a plan to effectively manage, operate and maintain the sanitary sewer system to help prevent future sanitary sewer overflows.

"Today's settlement represents EPA's continuing commitment to protect and restore the health of the Chesapeake Bay," said Cynthia Giles, Assistant Administrator of EPA's Office of Compliance and Assurance. "EPA's compliance and enforcement strategy targets sewage treatment plants, concentrated animal feeding operations, storm water runoff and other sources that may contribute significant pollution to the bay."

- Press Release (09/29/09)
- Consent Decree (PDF) (99 pp, 295K, About PDF)

In the Beginning: SSOs

Arterial or Collector Street



Protect Public Health,

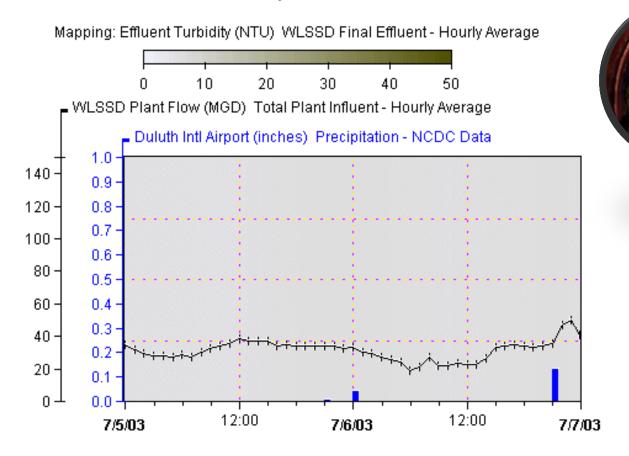
- Protect Property Values,
 - •Promote Development, ...

Local (Residential) Street



Sanitary Sewer Overflows Causes: RDI&I

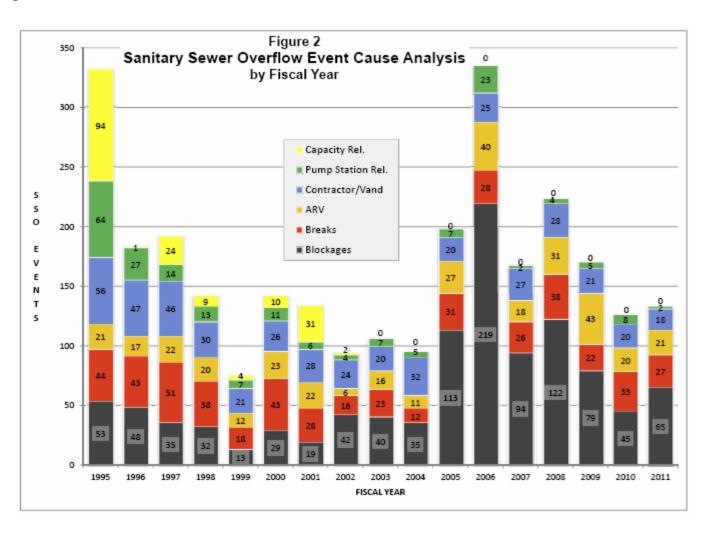
Duluth Precip. / WLSSD Flow



Sanitary Sewer Overflows Causes: FOG

Water and Sewer Department Emergency Communications WASD Incident #: 295183	DOMESTIC WASTEWATER DISCHARGE/ABNORMAL EVENT NOTIFICATION Version: 1 Version Type: Preliminary	ICATION Qualified UD	WIAMI-DADE COUNTY Water and Sewer Department Emergency Communications P? No	
Comments:				
Incident Version Created on:	11/09/13 02:35PM Job Order #:			
Location of Discharge: 14250	SW 62 ST UNINCORPORATED MIAMI-DADE 33183			The state of the s
Additional Location Description	: <u></u>			
Reported By WASD Employee?	Yes Employee ID: Employee Title:	Semi Skill Labor		John W.
Reported by:				The state of the s
Utility Name: Miami-Dade Wate	<u>er & Sewer</u> Phone Number: (305) 274-9272			
Path of Flow: South	On: Rear of Property			
Occurred at/in: Gravity Main				
Contractor Involved? No	Contractor Name:			
Discharge Due to/Caused by:	Gravity Main Blocked Due to Grease			
Additional Discharge Cause:			3	
Pine VCP (Votrified.)	Pine lize	8.00		

Sanitary Sewer Overflows Causes:



What's the problem with SSOs?

What is an SSO?

A sanitary sewer system is a wastewater collection system, owned by a state or municipality, that is specifically designed to collect and convey only sanitary wastewater (domestic sewage from homes as well as industrial and commercial wastewater). In such systems, storm water is conveyed through an additional set of pipes. These systems can overflow when collection system capacity is exceeded due to wet weather (as the result of infiltration and inflow), when normal dry weather flow is blocked for any of several reasons, or when mechanical failures prevent the system from proper operation.

In the Report to Congress, EPA estimates that between 23,000 and 75,000 SSOs occur each year in the United States, resulting in releases of between 3 billion and 10 billion gallons of untreated wastewater. These events take place throughout the United States.

What does the Report to Congress say?

This report includes 10 chapters covering all aspects of the statutory requirement from Congress. The report also includes a series of 23 technology descriptions providing detailed information, including case studies, on technologies for reducing the impacts of CSOs and SSOs.

What's the problem with SSOs?

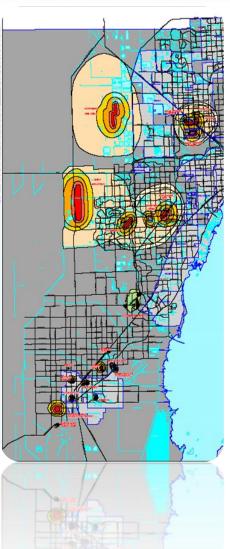


- Protect Public Health,
- Protect Property Values,
- •Promote Development, ...









Quick Quiz: SSOs







Which is least likely to cause a SSO?

Contractor Damage







Sanitary Sewer Capacity Certification (Allocation)

Sanitary Sewer Capacity Certification: When is an Allocation Required?

Sec. 24-42.3. Certification of sanitary sewer system collection, transmission and treatment capacity.

- (1) Notwithstanding any provision of this Code, no county or municipal officer, agent, employee or board shall approve, grant or issued any building permit, certificate of use and occupancy (except for changes in ownership) or municipal occupational license (except for changes in ownership) for any land use served or to be served by a publicly or privately owned or operated sanitary sewer collection system until the county or municipal officer, agent, employee or board has obtained the prior written unconditional approval or prior written conditional approval of the Director or the Director's designee. Notwithstanding any provision of this Code, no person shall construct, utilize, operate, occupy or cause, allow, let, permit or suffer to be constructed, utilized, operated or occupied any land use served or to be served by a publicly or privately owned or operated sanitary sewer collection system until the person has obtained the prior written unconditional approval or the prior written conditional approval of the Director or the Director's designee.
 - (a) The Director or the Director's designee shall issue the Director or the Director or the Director's designee finds that there will be adequate transmission capacity and adequate treatment capacity at the time that the land use is to be connected to an operable and available publicly or privately owned or operated sanitary sewer collection system or at the time that the existing land use will discharge additional sewage flow.
 - (b) If the Director or the Director's designee determines that there is not adequate treatment capacity or adequate transmission capacity, or both, the Director or the Director or the Director's designee shall issue the Director or the Director's designee's conditional written approval only if the Director or the Director's designee determines that the following requirements are met:
 - (i) The person(s) responsible for the operation of the publicly or privately owned treatment works has obtained all local, state and federal environmental approvals for the construction of additional wastewater treatment capacity;
 - (ii) The person(s) responsible for the operation of the publicly or privately owned or operated sanitary sewer collection system(s) has obtained the written approval of the Director or the Director's designee, and all other local, state and federal environmental approvals for plan(s) of corrective action designed to provide adequate transmission capacity; and
 - (iii) The person seeking the written conditional approval submits an executed estoppel document, in such form as prescribed by the Director or the Director's designee and recorded in the public records of Miami-Dade County, Florida, at the expense of the person seeking the written conditional approval. Said estoppel document shall contain, at a minimum, the following requirements:
 - 1. The person obtaining a building permit pursuant to a conditional written approval issued by the Director or the Director's designee shall not apply for a certificate of use and occupancy or municipal occupational license, nor shall the facilities being constructed under said building permit be connected to the publicly or privately owned or operated sanitary sewer collection system, until all of the conditions set forth in (i) and (ii) above have been completed with, that the construction pursuant to (i) above has been completed and certified and that the plan(s) of corrective action pursuant to (ii) above has been implemented, completed and certified.
 - (c) Notwithstanding any of the foregoing provisions in (b) above, the Director or the Director's designee shall not issue a written conditional approval if:
 - (i) A previously implemented approved plan for corrective action designed to provide adequate transmission capacity pursuant to (b)(ii) above failed to achieve adequate transmission capacity

Phased Permits?

Sanitary Sewer Capacity Certification: Past, Present & Future

Sanitary Sewer Capacity Certification: When is an Allocation Required?

PROCEDURES FOR PHASED PERMITS

- 1) Bring two sets of plans, calculations, survey, and a permit application to the permit counter to obtain a process number for your regular building permit.
- 2) Once the upfront fee has been paid, and the process number has been obtained, bring an additional application and two additional sets of plans of the architectural and structural portion of the building that you would like to permit under the Phased Permit process to the Building Official for approval. Please specify "phase permit" on the "job description" box on the application.
- 3) In addition to the documents required above, you will also be required to submit a letter from Miami Dade WASA of intention to issue the water and sewer allocation letter.
- 4) Take application to the Permit Counter to obtain a plan number and return to the see the Building Official.
- 5) Do not take Phased Permit plans to the Plans Processing Desk after obtaining your plan number. Return to the Building Official for plans approval along with your Hold Harmless letter and a letter from the private provider that will perform your inspections until the actual Building permit is issued. Phase Permit plans will not be reviewed by other trades.

Phased Permits?

Sanitary Sewer Capacity Certification: When is an Allocation Required?

When something is proposed that will result in an increase in Sewage Flow!

Residential

- New construction
- Additions
- New sewer connections (previous septic tank)
- Conversion of SFR to Multi-unit residence

Commercial

- New Construction
- Additions/Expansions
- Change of Uses (e.g., retail to doctor's office)
- Uses that will discharge flows greater than previously approved

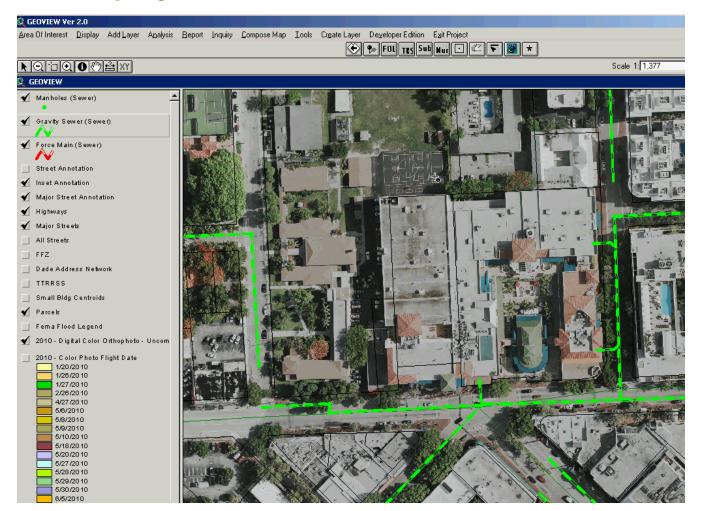
I'm not adding a bathroom?

... Certification...key factors to consider

Several factors determine if the sewer system has adequate capacity:

- Do <u>downstream station</u> pumps run an excess **number of hours** each day?
- •Has the collection system suffered and unusual number of <u>overflow</u> events? CAPACITY and/or INTEGRITY
- •Does the collection system frequently operate in a <u>surcharged</u> condition? CAPACITY
- •Have the force mains in the flow path had an excessive number of releases? CAPACITY and/or INTEGRITY

Sanitary Sewer Capacity Certification: How is Capacity Checked for a project?



The Federal Consent Decree: Where's Capacity Certification?

requirements or Paragraph 14.

16. c. Adequate Transmission and Treatment Capacity

i) As of the Date of Lodging of this Partial Consent Decree, Defendants shall authorize only those sewer service connections as provided for in this Paragraph, and only under the conditions set forth in Appendix B. This Paragraph shall apply both to Defendants' collection system and to the collection systems of entities and municipalities serviced on a "bulk" basis by Defendants.

ii) Adequate treatment capacity shall be demonstrated by Defendants' <u>certification</u> that the wastewater treatment plant that will receive flow from newly authorized sewer service connection(s) will not be in "non-compliance" as defined in 40 C.F.R. Part 123.45, Appendix A, at the time the wastewater treatment plant receives the flow from the newly authorized sewer service connection.

 iii) Adequate transmission capacity shall be demonstrated by Defendants' certification that each pump station immediately upstream from the pump station receiving flow from the newly authorized sewer service connection, and all pump stations through which flow from the newly authorized sewer service connection passes to the wastewater treatment plant receiving such flow, exhibits hominal average pump operating ime of less than or equal to ten (1) hours per day. Nominal average pump operating time shall be defined as the daily average total pump operating hours for the previous twelve (12) months divided by one less than the total number of pumps installed in that station. Certification of adequate transmission capacity for each newly authorized sewer service connection shall require the consideration of all existing flow and loadings, including anticipated wastewater flow, resulting from all previously authorized sewer service connection(s). Defendants shall

What happens when Projected NAPOT > 10 hrs?

Can't Certify Capacity!

Most commonly referred to as Moratorium

...1st Partial CD...

27

The Federal Consent Decree: Where's Capacity Certification?

requirements or Paragraph 14.

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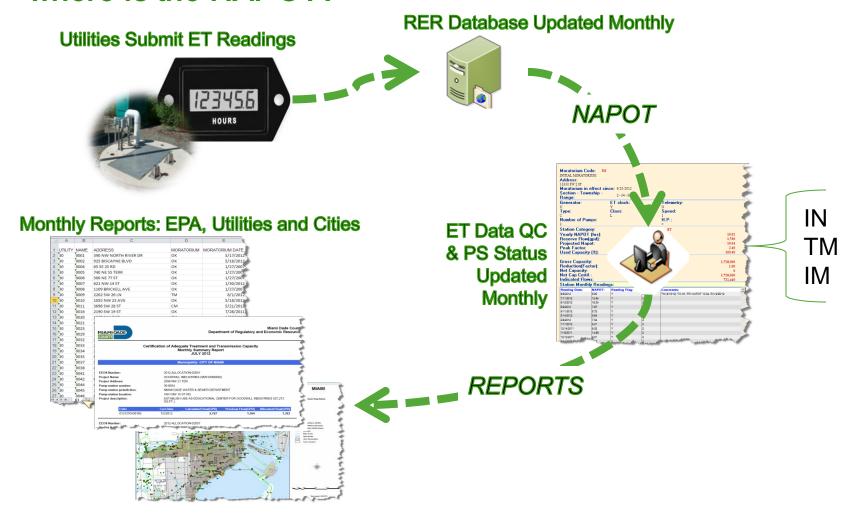
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Adequate Transmission Capacity Is Defined By: Proposed Projected NAPOT ≤ 10 Hrs!

Quick Quiz: Which one of these affects the NAPOT?



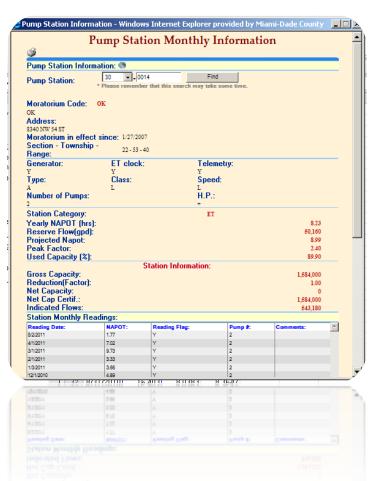
Sanitary Sewer Capacity Certification: Where does it begin & where is the NAPOT?



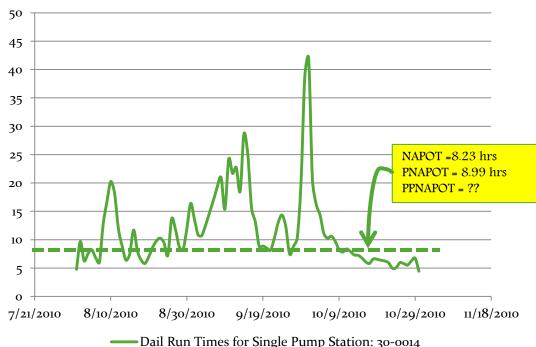
Sanitary Sewer Capacity Certification: What are IN, TM, IM..?

Status	Title	Description	
OK		All is good.	
IN	Insufficient Data	ET data has not been submitted.	
TM	Temporary Moratorium	Database has identified NAPOT > 10 hrs	
IM	Initial Moratorium	Staff has verified data and changed from TM to IM	
CM	Condition Moratorium	Plan of Corrective Action submitted by Utility	

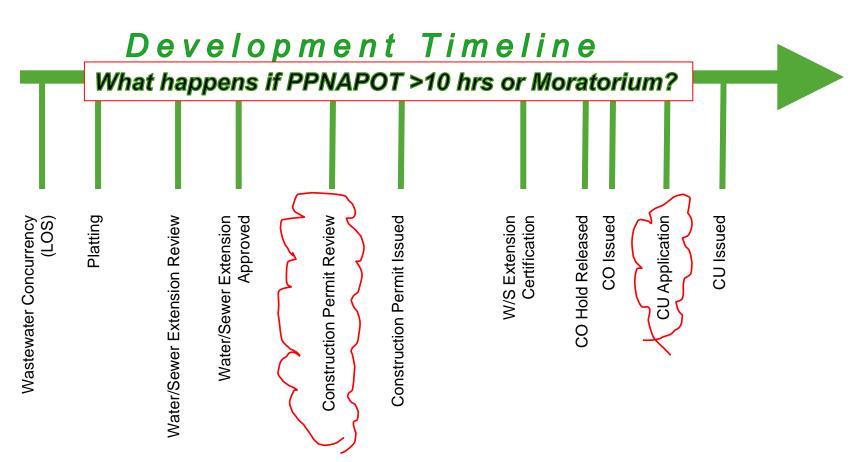
Is NAPOT a good representation of Peak Flow?



Dail Run Times for Single Pump Station: 30-0014



Sanitary Sewer Capacity Certification: When is Capacity Reserved (A.K.A. Allocation Letter)?



Pre-Design Resources: The Earlier the Better!

- Pump Station Status Request Submit (via email) a Pump Station Status
 Request and we will check status**.
 - **To be upgraded to a Web-Based application.
- **Letter of Interpretation** determine if use can be approved *before* investing, purchasing, renting, leasing, design, etc.
- Reserve Flow good for 90 days can be recertified.
- **Development Pre-submittal meeting** get the facts before committing.
- **Rework meeting** helps design professional understand the pending disapproval comments before resubmitting plans.

Pre-Design Resources: The Earlier the Better!

- Pump Station Status Request Submit (via email) a Pump Station Status Request and we will check status**
 **To be upgraded to a Web-Based application
 - Folio & Address
 - Pump Station (when in municipality)
 - Proposed Net Flow (Proposed Existing Flow Rate, GPD)

Project in Basin under Moratorium: Options?

- To be approved UNCONDITIONALLY, the project must result in a No-Net-Increase (NNI).
- Which project are NNIs?

Capacity

- Use Temporary Septic Tank System (use must be compatible).
- Use not change or use changes to equal or lower flow use:
 - Shoe Store to Dress Shop Retail to Retail
 - Full Service Restaurant to Take Out or Fast Food.
 - Take Out to Full Service
- Use changes to higher flow, but Flow Study shows no increase.
 - Actual Flow data from similar uses (e.g., Full Service Restaurant Chain shows that their restaurants uses 50 gpd/100 sqft instead of 100 gpd/100 sqft.)
 - Design incorporates higher efficiency fixtures or other design elements to reduce water consumption.





Capacity

Project in Basin under Moratorium: Flow Study!

	-	▼ (m f ₃		_	_		_
	Α	В	С	D	Е	F	G
4	Process Number:		_				
5	Exiting Use:	Office	Gym	Proposed Use:	Office	Gym	
6	Existing Sqft:	3572	600	Proposed Sqft:	0	4172	
7	Existing q (gpd/sqft):			Existing q (gpd/sqft):			
8	Existing Q (gpd):	0	0	Existing Q (gpd):	0	0	
9	Totaki Q (gpd):	0		Totakl Q (gpd):	0		
10	Net Q (gpd):	0.0					
11	- 121						
			RESID	DENTIAL BASE CASE			
2	Employees						
13			Used?			Visitors	100
			Yes=1		ŀ	Flow Rate	100
14			No=0	Unit Flow Ra	ates	GPD	Uses/Day
15	Water Closet	Conventional	1		GPF	0.00	1
16	Urinal_Male	Conventional	1		GPF	0.00	0.5
17	Lavatory Faucet (15 sec)	Conventional	1		GPM	0.00	1
18	Shower (20 min)	Conventional	1		GPM	0.00	1
19							
20							
21							
22					Domestic Volume =		GPD
23					Other flows =		GPD
24					Total =		GPD
25			RESIDI	ENTIAL DESIGN CASE			
26			Used?			Family Size:	100
			Yes = 1		ŀ		
27			No=0	Unit Flow Rates		GPD	Uses/Day
28	Water Closet	Conventional	1		GPF	0.00	1
	Urinal_Male	Conventional	1		GPF	0.00	0.5
	Lavatory Faucet (15 sec)	Conventional	1		GPM	0.00	1
	Shower (20 min)	Conventional	1		GPM	0.00	1
32							
33							
34 35					Domestic Volume =		GPD
36					Other flows =	· :	GPD
36 37					Other Hows = Total =	:	GPD
38					TO(a) =	-	GI-D
39				Dailu Volum	Daily Volume Saved by Retrofit =		gal
40				Daily voidin	is observed by restolic	•	301
41							
					Percent Reduction =	#DIV/0!	



Sanitary Sewer Capacity Certification: What's Next?

- Fill-IN Allocations
- HAMA Moratorium
- Allocation Expires within 150 days of Construction Permit Expiring

What's Else is New?

- Municipal Utilities:
 - Electronic Atlas
 - Electronic As-Built
 - Model Updated every 5 years
 - •Other VSCO:
 - Information Management System
 - Asset Management Program
 - Gravity O&M Program
 - Pump Station Operation and Preventive Maintenance Program
 - Force Main Operation, Preventive Maintenance and Assessment/Rehabilitation Program

What's Else is New?

- •FOG Control Program:
 - FOG Characterization Study
 - FOG Control Devices
 - Specifications
 - Design Standards
 - Inspection Standards
 - O&M Standards



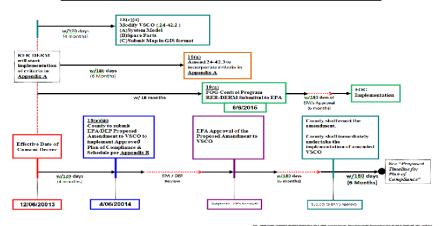
Sanitary Sewer Capacity Certification: What's Next?

PS Moratorium Codes

Allocations Cheat-Sheet

Sanitary Sewer Capacity Certification: What's Next?

Proposed Timeline for Paragraph 18 Requiring Modifications to the Volume Sewer Customers (VSC) and Paragraph 19 (FOG)



Sanitary Sewer Capacity Certification: What's Next?

While the definition for Adequate Transmission Capacity remains the same – **Projected NAPOT ≤ 10 hrs -** there is a significant change that will allow <u>Additional Flows to be</u> <u>authorized when a downstream pump station is under Conditional Moratorium.</u>

Currently:

Additional flows can ONLY be Unconditionally authorized if: PPNAPOT ≤ 10 Hrs & NO Moratorium

Projects with existing connection to sewers or connecting to an existing Gravity sewer through a lateral: FILL-IN

Additional flows can be "Unconditionally Authorized" if:

- (a) Proposed Projected NAPOT ≤ 12 hrs:
 - (i) Pump Station(s) with a moratorium status can only be CM/CH, all others OK or OH, and
 - (ii) Proposed Projected NAPOT increase ≤ 0.5 hrs, and
 - (iii) Additional Flow ≤ 10,000 GPD

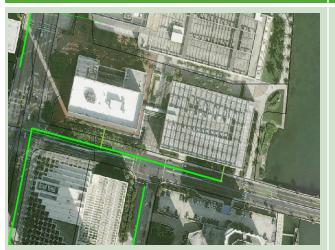
Fill-In NOT Fill-In

Projects without existing connection to sewers (SE Required): HAMA

Additional flows can be "Unconditionally Authorized" if:

- (a) Proposed Projected NAPOT ≤ 10 hrs, <u>and</u>
 - (i) Projected AADF \leq 1,000 GPD or,
 - (ii) HAMA < 15 hrs, or
 - (iii) HAMA ≥ 15 hrs but peak flow capacity study shows no upgrades required + no SSOs w/in prior
 12 months.

HAMA Restrictions N/A



HAMA Restrictions May Apply





Sewer Allocation Process:

- 1. Identify Point of Connection (POC).
 - a. WASD
 - b. Municipal/Other Utility
- 2. Check Moratorium Status for "ALL" Pump Stations
 - a. NO Allocations if: IN, IM, AM, FN, FH, TH & TM
- 3. Check if SE required
 - a. If POC is Force Main, SE is always required!
 - b. If feasible distance applies, SE is always required!
 - c. If gravity abutting, most likely a lateral
- 4. Calculate Proposed Net Sanitary Sewer Flow Rate
 - a. Sec. 24-43.1(6)
 - b. Flow Study
- 5. When do you need to check with WPS?
 - a. HAMA > 15 hrs, and
 - b. New SE, and
 - c. Net Proposed Flow > 1,000 GPD

Sample Problem No. 1:

- 1. New 10,000 sqft Office Building on vacant land (PNSSFR = 500 GPD & FD = 300 ft)
- 2. Force Main is located 310 feet from property
- 3. Gravity sewer abuts property
- 4. All pump stations are OK
- 5. PPNAPOT < 10 hrs

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 1:

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- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 2:

- 1. New 10,000 sqft Office Building on vacant land (PNSSFR = 500 gpd & Calculated FD = 667 ft)
- 2. Force Main is located 310 feet from property
- 3. All pump stations are OK
- 4. PPNAPOT < 10 hrs

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 2:

- 1. New 10,000 sqft Office Building on vacant land (PNSSFR = 500 gpd & Calculated FD = 667 ft)
- 2. Force Main is located 310 feet from property
- 3. All pump stations are OK
- 4. PPNAPOT < 10 hrs

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold 🛑
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 3:

- 1. New 10,000 sqft Office Building on vacant land (PNSSFR = 500 GPD & Calculated FD = 667 ft)
- 2. Force Main is located 310 feet from property
- 3. All but one (1) pump station, which is CM, are OK
- 4. PPNAPOT < 10 hrs

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 3:

- 1. New 10,000 sqft Office Building on vacant land (PNSSFR = 500 GPD & Calculated FD = 667 ft)
- 2. Force Main is located 310 feet from property
- 3. All but one (1) pump station, which is CM, are OK
- 4. PPNAPOT < 10 hrs

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 4:

- 1. New 10,000 sqft Office Building on vacant land (PNSSFR = 500 GPD & Calculated FD = 667 ft)
- 2. Gravity main abuts property
- 3. First PS is IM with PPNAPOT of 8 hrs.
- 4. All other pump stations are OK

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 4:

- 1. New 10,000 sqft Office Building on vacant land (PNSSFR = 500 GPD & Calculated FD = 667 ft)
- 2. Gravity main abuts property
- 3. First PS is IM with PPNAPOT of 8 hrs.
- 4. All other pump stations are OK

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 5:

- 1. New 10,000 sqft Office Building on vacant land (PNSSFR = 500 gpd & Calculated FD = 667 ft)
- 2. Gravity main abuts property
- 3. First PS is CM with PPNAPOT of 11 hrs, PPNAPOT $\Delta T = 0.45$ hrs and all other pump stations are OK

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 5:

- 1. New 10,000 sqft Office Building on vacant land (PNSSFR = 500 gpd & Calculated FD = 667 ft)
- 2. Gravity main abuts property
- 3. First PS is CM with PPNAPOT of 11 hrs, PPNAPOT $\Delta T = 0.45$ hrs and all other pump stations are OK

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 6:

- 1. New 10,000 sqft Office Building on vacant land (PNSSFR = 500 GPD & Calculated FD = 667 ft)
- 2. Gravity main abuts property
- 3. First PS is CH (HAMA = 18 hrs) with PPNAPOT of 11 hrs and PPNAPOT $\Delta T = 0.45$ hrs
- 4. All other pump stations are OK

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 6:

- 1. New 10,000 sqft Office Building on vacant land (PNSSFR = 500 GPD & Calculated FD = 667 ft)
- 2. Gravity main abuts property
- 3. First PS is CH (HAMA = 18 hrs) with PPNAPOT of 11 hrs and PPNAPOT $\Delta T = 0.45$ hrs
- 4. All other pump stations are OK

- a. Project is Fill-In
 - AAAA limitad
- b. Project is *HAMA* limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 7:

- 1. New 100,000 sqft Retail Outlet on vacant land (PNSSFR = 10,000 GPD & Calculated FD = 667 ft)
- 2. Gravity main abuts property
- 3. First PS is CH (HAMA = 18 hrs) with PNAPOT of 11 hrs and PPNAPOT $\Delta T = 0.5$ hrs
- 4. All other pump stations are OK

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 7:

- 1. New 100,000 sqft Retail Outlet on vacant land (PNSSFR = 10,000 GPD & Calculated FD = 667 ft)
- 2. Gravity main abuts property
- 3. First PS is CH (HAMA = 18 hrs) with PNAPOT of 11 hrs and PPNAPOT $\Delta T = 0.5$ hrs
- 4. All other pump stations are OK

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation



- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 8:

- 1. New 100,000 sqft Retail Outlet on vacant land (PNSSFR = 10,000 GPD & Calculated FD = 667 ft)
- 2. Gravity main abuts property
- 3. First PS is CH (HAMA = 18 hrs) with PPNAPOT of 11 hrs and PPNAPOT $\Delta T = 0.6$ hrs
- 4. All other pump stations are OK

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 8:

- 1. New 100,000 sqft Retail Outlet on vacant land (PNSSFR = 10,000 GPD & Calculated FD = 667 ft)
- 2. Gravity main abuts property
- 3. First PS is CH (HAMA = 18 hrs) with PPNAPOT of 11 hrs and PPNAPOT $\Delta T = 0.6$ hrs
- 4. All other pump stations are OK

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation w/RAP Cert. Hold
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 9:

- 1. New 100,000 sqft Retail Outlet on vacant land (PNSSFR = 10,000 GPD & Calculated FD = 667 ft)
- 2. Gravity main located 500 ft from property
- 3. First PS is OH with PPNAPOT of 9 hrs and PPNAPOT $\Delta T = 0.5$ hrs
- 4. All other pump stations are OK

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 9:

- 1. New 100,000 sqft Retail Outlet on vacant land (PNSSFR = 10,000 GPD & Calculated FD = 667 ft)
- 2. Gravity main located 500 ft from property
- 3. First PS is OH with PPNAPOT of 9 hrs and PPNAPOT $\Delta T = 0.5$ hrs
- 4. All other pump stations are OK

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 10:

- 1. New 5,000 sqft Retail Outlet on vacant land (PNSSFR = 500 GPD & FD = 300 ft)
- 2. Gravity main located 100 ft from property
- 3. First PS is OH with PPNAPOT of 9 hrs and HAMA = 20 hrs
- 4. All other pump stations are OK

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 10:

- 1. New 5,000 sqft Retail Outlet on vacant land (PNSSFR = 500 GPD & FD = 300 ft)
- 2. Gravity main located 100 ft from property
- 3. First PS is OH with PPNAPOT of 9 hrs and HAMA = 20 hrs
- 4. All other pump stations are OK

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 11:

- 1. New Mixed-Use Development with PNSSFR = 1,500 GPD & FD = 300 ft
- 2. Gravity main located 100 ft from property
- 3. First PS is OH with PPNAPOT of 9 hrs and HAMA = 18 hrs
- 4. All other pump stations are OK

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 11:

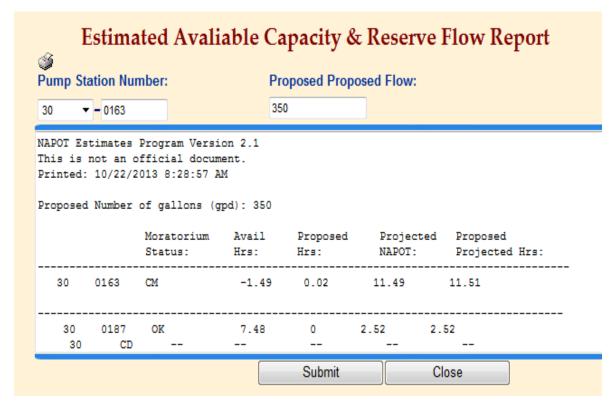
- 1. New Mixed-Use Development with PNSSFR = 1,500 GPD & FD = 300 ft
- 2. Gravity main located 100 ft from property
- 3. First PS is OH with PPNAPOT of 9 hrs and HAMA = 18 hrs
- 4. All other pump stations are OK

- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS



Sample Problem No. 12:

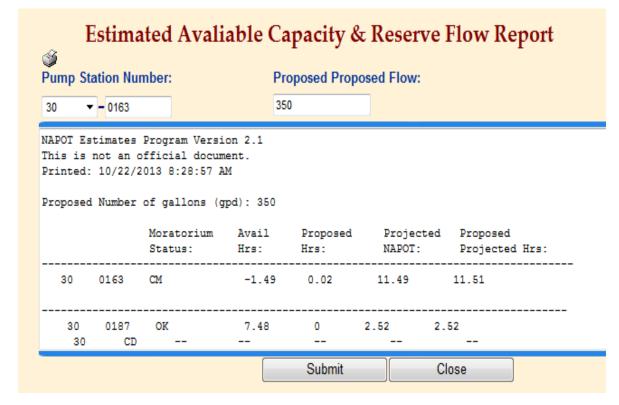
- 1. CU application for change of use (Office to Retail), Qnet = 350 GPD
- Property connected to abutting sewer
- 3. First PS is 30-0163



- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS

Sample Problem No. 12:

- 1. CU application for change of use (Office to Retail), Qnet = 350 GPD
- 2. Property connected to abutting sewer
- 3. First PS is 30-0163



- a. Project is Fill-In
- b. Project is HAMA limited
- c. Unconditional Allocation
- d. Conditional Allocation w/SE Hold
- e. Conditional Allocation
- f. NO Allocation
- g. Connection is NOT required
- h. Call WPS